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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
LAM, DANIEL K	
ART UNIT	PAPER NUMBER
2667	2

DATE MAILED: 05/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/737,143	WILLEKES ET AL.	
	Examiner	Art Unit	
	Daniel K Lam	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 December 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. Since the major part of the invention involving ***multicasting*** technique for distributing a file, it should be mentioned in the title. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The abstract is too long. It should be generally limited to a single paragraph within the range of **50 to 150 words**. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited.

Claim Objections

3. The following informalities are objected to:
   - In claim 1, line 17, "error reporting" should be "err reporting" instead.
   - In claim 9, line 8, "not previous incorrectly received" should be "not previous correctly received" instead.

   Appropriate corrections are required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 10, 11, and 16-18** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There are insufficient antecedent basis in **claims 10, 11, and 16-18** for the following limitations:

- Claim 10 recites the limitation of "the sender network component" in line 14; "the sender" in lines 19, 24, 30, and 38.
- Claim 11 recites the limitation of "the sender" in line 1.
- Claim 16 recites the limitation of "the sender" in line 3.
- Claim 17 recites the limitation of "the sender" in lines 3 and 5, and recites the limitation of "the fifth set of sender software instructions" in line 1.
- Claim 18 recites the limitation of "the sender" in line 3.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S.

patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. **Claims 1, 6, 7, 9, 10, 15, 16, 18, 19, 24, 25, and 27 are** rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Pat. No. 5,727,002 issued to Miller et al (hereinafter Miller).

Regarding **claim 1,** Miller discloses a method for fast and reliable transmission of files from a server to one or more clients over a communication link (wireless, cellular, WAN, or LAN (see col. 2, lines 32-34)) comprising:

- A server 20 (see figure 2) sends announcement and registration messages (see figure 1 step 8) to the clients 22(1) to 22(N) for setting up multicast groups (The sender establishing a multicast session with the receivers). See col. 6, lines 24-28.
- The server transmits a file in the form of frames (The sender subdividing the file into data packets) and multicasts the frames to the clients (The sender multicasting the data packet to the receivers). See figure 1 step 10, and col. 4, lines 53-57.
- As the frames are being transmitted, the sender receives negative acknowledgements from one or more clients (At least some of the receivers failing to correctly receive all the data packets and err reporting to the sender). See figure 1 step 10, and col. 4, lines 60-62.

- The sender only retransmits those frames that are reported in error in the negative acknowledgements by the clients (The sender transmitting previously incorrectly received data packets). See figure 1 step 14, and col. 4, lines 63-66.

Regarding **claim 10,** Miller discloses a system, for fast and reliable transmission of files from a server to one or more clients over a communication link (wireless, cellular, WAN, or LAN (see col. 2, lines 32-34)), comprises a server and many clients which can be computers, PCs, or workstations (see col. 5, lines 36-43). Typically, the server or client comprises: a processor 50 (see figure 5), a memory module 52, and a network interface 56. They are coupled together by bus 68. (The server component comprising: a processor; a memory, and a network interface; each receiver component comprising: a processor, a memory, and a network interface). Furthermore:

- The server 20 (see figure 2) sends announcement and registration messages (see figure 1 step 8) to the clients 22(1) to 22(N) for setting up multicast groups (A first set of sender software instructions causes the sender to establish a multicast session with the receiver; a first set of receiver software instructions causes the receiver to interact with the sender to join the multicast session). See col. 6, lines 24-28.
- The server transmits a file in the form of frames (a second set of sender software instructions causes the sender to subdivide the file into data packets) and multicasts the frames to the clients (a third set of sender software instructions causes the sender to multicast the data packets to the receivers). See figure 1 step 10, and col. 4, lines 53-57.

- The sender receives negative acknowledgements from one or more clients (a second set of receiver instructions causes the receiver to err report to the sender). See figure 1 step 10, and col. 4, lines 60-62.
- The sender only retransmits those frames that are reported in error in the negative acknowledgements that are sent by the clients (a fourth set of sender software instructions causes the sender to transmit incorrectly received data packets to the receiver). See figure 1 step 14, and col. 4, lines 63-66.

Regarding **claim 19,** Miller discloses a system for fast and reliable transmission of files from a server to one or more clients over a communication link (wireless, cellular, WAN, or LAN (see col. 2, lines 32-34)) comprising:

- An application layer 30 (see figure 3) of the TCP/IP protocol stack 32 on the top of UDP operates on both server and client sides (a server protocol suite operating on a sender and a plurality of receiver protocol suites operating on receivers), The server and clients are connected by the network 24 (see figure 2) (wherein the receiver is communicatively coupled to the sender). See col. 5, lines 64-67.
- The server 20 (see figure 2) sends announcement and registration messages (see figure 1 step 8) to the clients 22(1) to 22(N) for setting up multicast groups (wherein the server protocol suite causes the sender to establish a multicast session with the receivers and wherein the receiver protocol suite causes the receivers to interact with the sender to join the multicast session). See col. 6, lines 24-28.
- The server transmits a file in the form of frames (wherein the server protocol suite causes the sender to subdivide the file into data packets) and multicasts the frames to

the clients (wherein the server protocol suite causes the sender to multicast the data packets to the receivers). See figure 1 step 10, and col. 4, lines 53-57.

- The sender receives negative acknowledgements from one or more clients (wherein the receiver protocol suite causes the receivers to err report to the sender). See figure 1 step 10, and col. 4, lines 60-62.
- The sender only retransmits those frames that are reported in error in the negative acknowledgements by the clients (the server protocol suite causes the sender to transmit incorrectly received data packets). See figure 1 step 14, and col. 4, lines 63-66.

Regarding **claims 6, 15, and 24**, in addition to disclose the limitations in claims 1, 10 and 19 discussed earlier, Miller further discloses down loading quickly and reliably new revision client software from the server onto one or more of clients (The receivers comprise a group of network components requiring a software update and the file comprises the software update). See col. 5, lines 61-63.

Regarding **claims 7, 16, and 25**, in addition to disclose the limitations in claims 1, 10, and 19 discussed earlier, Miller further discloses that, after a predetermined period of time or event, the server 20 sends a status request to all unresponsive recipients 22 and awaiting the recipients to send negative acknowledgements (The sender transmitting an error status request to the receivers and at least one of the receivers responding to the sender with an error message; claim 7. A fifth set of sender software instructions causes the sender to

transmit an error status request to the receivers; and a sixth set of sender software instructions causes the sender to receive an error status response from at least some of the receivers; claim 16. Wherein the server protocol suite causes the sender to transmit an error status request to the receivers; and wherein the receive protocol suite causes each receiver to respond to the sender with an error status response; claim 25). See figure 1 step 18, and col. 5, lines 13-16.

Regarding **claims 9, 18 and 27**, in addition to disclose the limitations in claims 1, 10 and 19 discussed earlier, Miller further discloses that

- As frames are being transmitted, negative acknowledgements from one or more recipients 22 are received by the sender forming a subset of the clients that have not correctly received the frames (The sender determining a subset of receivers that failed to correctly receive all data packets; claim 9. A fifth set of sender instructions to determine a subset of receivers that failed to correctly receive all the data packets; claim 18. Wherein the server protocol suite causes the sender to determine a subset of receivers that failed to correctly receives all data packets; claim 27). See figure 1 step 10, and col. 4, lines 60-62.
- The sender only retransmits those frames that are reported in error in the negative acknowledgements by the clients (The sender of the file determining a corresponding set of data packets that were not correctly received and the sender multicasting the set of data packets; claim 9. A fifth set of sender instructions to determine a corresponding set of data packets that were not correctly received by the subset of receivers, and to multicast the corresponding set of data packets to the subset of

receivers; claim 18. Determine a corresponding set of data packets [that] were not correctly received by the subset of receivers; and multicast the corresponding set of data packets to the subset of receivers; claim 27). See figure 1 step 14, and col. 4, lines 63-66.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. **Claims 2-5, 11-14, and 20-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Pat. No. 5,727,002 issued to Miller et al (hereinafter Miller) in view of U. S. Pat. No. 6,128,776 issued to Kang.

Regarding **claims 2, 11 and 20**, Miller discloses the limitations in claims 1, 10 and 19 discussed earlier. Although he further discloses the communication network can be a wireless network (see col. 2, lines 32-34), he does not explicitly disclose the limitation that the sender is a base station manger. But Kang discloses a CDMA based PCS network system (see figures 1 and 2) comprises a Base Station Manager BSM and many Base Station Controllers (BSC). The BSM contains software loads that can be downloaded into Call Control Processors (CCP) which are located within the Base Station Controller (BSC). See col. 8, lines 30-36.

Therefore, it would have been obvious to those having ordinary skill in the art, at the time of invention, to distribute file or software using multicasting technique, in a wireless network system with BSM, such that the BSM establishes a multicast session with a group of BSCs, divides a file or software into data packets, and retransmits the data packets that are incorrectly received by the BSCs, for a key reason. Since in a CDMA based PCS system, a BSC contains numerous processors, such as CCP, CSP, ACP etc (see figure 2). Furthermore, a BSM controls many BSCs. The BSM along with the multicast session allows an operator to down load configuration data and software loads into the BSCs quickly. See col. 1, lines 18-20.

Regarding **claims 3, 12, and 21**, in addition to disclose the limitations in claims 1, 10 and 19 discussed earlier, Kang further discloses loading software from BSM into Call Control Processor (CCP) which is located within the Base Station Controller (the receivers are base station controllers). Also see col. 8, lines 30-36.

Regarding **claims 4, 13, and 22**, in addition to disclose the limitations in claims 1, 10 and 19 discussed earlier, Kang further discloses, if a lower processor, such as a BCP in a BTS (see figure 2), then the BSM generates the address and load request to load the software (the receivers are base stations). See col. 7, lines 22-25.

Regarding **claims 5, 14, and 23**, in addition to disclose the limitations in claims 4, 13 and 22 discussed earlier, Kang further discloses, the base stations using CDMA technology (the base stations operate according to CDMA). See col. 2, line 21. Furthermore, the BCP, which is the controller for the BTS, loads software into CIP, TIP,

and BTP processors that are located inside the BTS (the base station load the file onto processing cards contained within the base stations). See col. 2, lines 4-6.

10. **Claims 8, 17 and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Pat. No. 5,727,002 issued to Miller et al (hereinafter Miller) in view of U. S. Pat. No. 6,505,253 issued to Chiu et al (hereinafter Chiu).

Regarding **claims 8, 17, and 26**, in addition to disclose the limitations in claims 1, 10 and 19 discussed earlier, Miller discloses that, after a predetermined period of time or event, the server 20 sends a status request to all unresponsive recipients 22 and awaiting the recipients to send negative acknowledgements (The sender sends an error status request to the receivers). See figure 1 step 18, and col. 5, lines 13-16.

However, Miller does not disclose sending the error request to first plurality of receivers during a first time period, to a second plurality of receivers during a second time period, and the first time period is different from the second time period.

On the other hands, Chiu discloses acknowledgement messages from receivers are distributed among repair head stations in such a way that each repair head station can handle all the acknowledgement messages belong to it. See col. 8, lines 1-10. Furthermore, in order to prevent member stations from sending acknowledgement messages at the same time, acknowledgement messages are distributed over acknowledgement windows. See col. 8, lines 36-39.

Therefore, it would have been obvious to those having ordinary skill in the art, at the time of invention, to send error status request to first group of receivers during a first time period, and to send another error status request to second group of receivers during a second time period for a key reason. Since the receivers are divided into two groups and are queried during two time periods, the acknowledgement messages are spreading out so that the sender will not be flooded by the acknowledgement messages. See col. 8, lines 13-17.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel K. Lam whose telephone number is (703) 305-8605. The examiner can normally be reached on Monday-Friday from 8:30 AM to 4:30 PM.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (703) 305-4378. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status Information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DKL dkl
April 27, 2004

CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 4/29/04